

Patent claims

1. A method of coding information on articles, characterized in that for coding the information a fluorescent dyestuff is used.

5           2. The method defined in claim 1, characterized in that a fluorescent dyestuff is used which fluoresces within 1 to 200 nanoseconds following excitation with energy-rich light.

          3. The method according to one of claims 1 to 2, characterized in that the fluorescent dyestuff used emits light in  
10 the wavelength range of 300 to 1800 nm.

          4. The method according to one of claims 1 to 3, characterized in that the following compounds, pyrene compounds, uranine, quinine, fluorescein, rhodamine, acridine orange, tetracycline, porphyrine is used.

15           5. The method according to one of claims 1 to 4, characterized in that different fluorescent dyestuffs are used simultaneously.

6. The method according to one of claims 1 to 5,  
characterized in that with the simultaneous use of different  
fluorescent dyestuffs, these differ only slightly in absorption  
characteristics but differ significantly in emission  
characteristics.

7. The method according to one of claims 1 to 6,  
characterized in that black-white bar codes and fluorescent  
dyestuffs are used for the coding of information.

8. The method according to one of claims 1 to 7,  
characterized in that the fluorescent dyestuff is applied in a  
diffused pattern to the article.

9. The method according to one of claims 1 to 8,  
characterized in that the fluorescent dyestuff is applied in the  
form of a bar code to the article.

10. The method according to one of claims 1 to 9,  
characterized in that the fluorescent dyestuff is applied by a  
printing process to the article.

11. The method according to one of claims 1 to 10,  
characterized in that a fluorescent dyestuff is used which does not  
fluoresce in the spectral range of 400 to 700 nm.

12. The method according to one of claims 1 to 11, characterized in that the fluorescent dyestuff is introduced during the manufacturing process of the material of the article and characterizes it.

5 13. A device for evaluating coded information which as been coded by means of a fluorescent dyestuff, comprising at least one light source and at least one detector, characterized in that the light source and detector are arranged in a reading head or a detection chamber and the device includes means for controlling the  
10 light emission.

14. The device according to claim 13, characterized in that the detection chamber is shielded against foreign light.

15 15. The device according to claims 13 to 14, characterized in that the light sources and detectors are distributed over the interior of the detection chamber.

16. The device according to claims 13 to 15, characterized in that the inner surfaces of the detection chamber are coated with reflecting color or are fabricated from reflected material.

17. The device according to claim 13, characterized in that the reading head is equipped with light guides for the emitted light and light guides for the fluorescent light.

18. The device according to claims 13 and 17,  
5 characterized in that the reading head has a rubber collar.

19. The device according to claims 13 to 18, characterized in that the light pulses are synchronized in time with the detector.

20. The device according to claims 13 to 19,  
10 characterized in that the light sources have a spectrum between 200 to 1800 nm.

21. The method of evaluating coded information which has been coded by means of a method according to claims 1 to 13, characterized in that a device according to claims 13 to 20 is  
15 used.